

**APPENDIX B**

**EFFECTS**

**FINDINGS**

**CONSISTENCY**

**ASSESSMENT**





# Appendix B

## Consistency Review - 1994 Northwest Forest Plan Findings

Appendix B contains a consistency review of findings within the Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, Volume I, February 1994, (Northwest Forest Plan FSEIS). The Interdisciplinary Team (IDT) reviewed the Northwest Forest Plan FSEIS to determine whether the findings or rationale within the Final SEIS could be affected, influenced or altered by the proposed language change in the ACS SEIS.

The IDT found that none of the effects findings explicitly rely on the language proposed to be amended. The Northwest Forest Plan FSEIS effects' findings rely on the four components of the Aquatic Conservation Strategy (watershed analysis, watershed restoration, Riparian Reserves and Key Watersheds). These components are retained in the Proposed Action/Alternative A.

The ACS SEIS is not intended to reconsider the analysis within the Northwest Forest Plan FSEIS. Analysis and findings within the FSEIS are incorporated by reference. Analysis and findings are excerpted and/or briefly described.

The action alternatives within the ACS SEIS are intended to improve agency success implementing Alternative 9. Managers would attempt to implement Alternative 9 with both No Action and the Proposed Action/Alternative A in the ACS SEIS. However, managers have been unable to achieve harvest levels associated with Alternative 9 as adjusted in individual RMPs (see ACS FSEIS Chapter 3&4 for more information). Harvest levels have been closer to Alternative 1. As discussed previously, agencies would continue to plan projects that follow Northwest Forest Plan principles (Alternative 9). Based on public comments received on the Draft SEIS, the projects most likely to be stopped or delayed include an element of timber harvest within late-successional and old-growth forest.

The comments state that "faithful implementation of the ACS" would exclude such harvest. Given these attitudes, land managers would be encouraged to avoid such harvests (see BLM Bulletin for example of "interim" direction). In this regard, the results of No Action would more likely result in harvest levels (and environmental effects) more like Alternative 1.

Frequently, the Northwest Forest Plan FSEIS lumped Alternatives 1 and 9 in reference to effects on aquatic ecosystems. This is because both alternatives included large Riparian Reserves and the Aquatic Conservation Strategy. No Action and the Proposed Action/Alternative A within the ACS SEIS retain the Aquatic Conservation Strategy components, including large Riparian Reserves. The clarification addressed by the Proposed Action/Alternative A is a matter of scale of analysis and documentation requirements. None of the findings related to the Aquatic Conservation Strategy components or the system of Riparian Reserves are sensitive to these clarifications. However, No Action would likely have results more similar to Alternative 1 to the extent fewer projects would likely be implemented.

## **Chapter 1 - Purpose and Need**

*Chapter 1, pgs. 1 - 7*

Chapter 1 described the underlying need for action. It characterized the need by referring to a speech by President Bill Clinton:

“[As we craft a plan, we need to protect the long-term health of our forests, our wildlife, and our waterways.... [We hold them in trust for future generations... We must never forget the human and the economic dimensions of these problems. Where sound management policies can preserve the health of forest lands, [timber] sales should go forward... The plan should produce a predictable and sustainable level of timber sales and non-timber resources that will not degrade or destroy the environment. “

Chapter 1 characterized the Purpose as:

“[Our efforts must be, insofar as we are wise enough to know it, scientifically sound, ecologically credible, and legally responsible... We will do our best to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the Federal Government and we will insist on collaboration not confrontation.”

No analytical assumptions or conclusions within this section depend on or are sensitive to differences between No Action and the Proposed Action/Alternative A.

## Chapter 2 - The Alternatives

### *Chapter 2, pgs. 3 - 84*

Chapter 2 of the 1994 FSEIS described the alternatives considered. References to the Aquatic Conservation Strategy within this chapter are applicable to both the Proposed Action/Alternative A and No Action:

“The Riparian Reserves provide an area along all streams, wetlands, ponds, lakes, and unstable and potentially unstable areas where riparian-dependent resources receive primary emphasis...The Aquatic Conservation Strategy was developed primarily to protect salmon and steelhead, and is a refinement of the approach outlined in Thomas et al. (1993). “

“The four elements of the strategy are: Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration. These components are designed to operate together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems. All components of this strategy apply to all alternatives with the exception of Alternative 7... The underlying need (see Chapter 1) of providing for late-successional and old-growth forest habitat and minimizing adverse economic effects substantially limited the range of reasonable alternatives available for analysis.”

This chapter described Alternative 1:

“This alternative is designed to have the highest probability of meeting five biological criteria...Essentially, all old-growth forests would be protected; forests adjacent to streams would receive significant protection to protect fish; and, to permit spotted owl dispersal, some forest cover would be retained in areas where timber harvest is allowed.”

Alternative 9 was described as:

“Alternative 9 is the preferred alternative for this SEIS. It is the alternative that most closely offers the specific management direction that would put into effect the proposal that President Clinton announced on July 1, 1993, titled "The Forest Plan: For a Sustainable Economy and a Sustainable Environment" (Clinton and Gore 1993).”

Both Alternative 1 and Alternative 9 had the same guidelines for Riparian Reserves. Both included the ACS. No analytical assumptions or conclusions within this chapter depend on or are sensitive to differences between No Action and the Proposed Action/Alternative A.

Chapter 2 provided a comparison table that demonstrates timber volume (PSQ) associated with Alternatives 1 and 9. Alternative 1 is shown to produce less than 1/10<sup>th</sup> the amount of timber each year as Alternative 9. Timber sales offered in recent years have reached levels closer to Alternative 1 than Alternative 9. The No Action alternative would likely result in continued low harvest levels relative to Alternative 9 (as adjusted in

individual RMPs). Chapter 3&4 of the ACS FSEIS discloses that Proposed Action/Alternative A would likely help agencies implement projects to meet Northwest Forest Plan goals.

Chapter 2 summarized and compared a variety of effects discussed in Chapter 3&4. These are addressed in the Chapter 3&4 review below.

## **Chapter 3&4**

### **Affected Environment and Environmental Consequences**

#### ***Chapters 3&4, pgs. 3 –10: Introduction through Cumulative Effects***

No analytical assumptions or conclusions within this chapter depend on or are sensitive to differences between No Action and the Proposed Action/Alternative A. Specific references are discussed below.

#### ***Chapters 3&4, pgs. 11 – 24: Ecosystems and Species***

This section described the various ecological provinces that make up the Northwest Forest Plan area. Implementation of the Proposed Action/Alternative A would not change the effects findings.

#### ***Chapters 3&4, pgs. 24 – 51: Terrestrial Ecosystems***

The Terrestrial Ecosystems section of Chapters 3&4 focused on an analysis of the alternatives relative to their ability to provide for and maintain a functional and interconnected, late-successional forest ecosystem. Three attributes, as listed below, were used to rate each alternative in relation to four possible outcomes in each attribute.

- Abundance and ecological diversity – the acreage and variety of plant communities and environments.
- Processes and functions – the ecological actions that lead to the development and maintenance of the ecosystem, and the values of the ecosystem for species and populations.
- Connectivity – the extent to which the landscape patterns of the ecosystem provides for biological flows that sustain animal and plant populations.

Late –Successional reserves were intended to provide the primary mechanism for maintaining large blocks of late-successional habitat within the range of the northern spotted owl. However, the FSEIS stated that:

“Attributes (1) abundance and diversity, and (3) connectivity, are expected to be strengthened by the application of Riparian Reserve Scenario 1...”

This section made repeated references to the Riparian Reserves and their conservation function. The Proposed Action/Alternative A does not change any Riparian Reserve Standard and Guideline, nor does it change direction related to adjustment of Riparian Reserve boundaries.

The Riparian Reserve scenario associated with both Alternative 1 and 9 would contribute to achieving predicted outcomes as described in this section of the FSEIS.

“Application of Riparian Reserve Scenario I in the intermittent streams would benefit a wide variety of terrestrial and aquatic species by providing additional habitat. These species include the northern spotted owl, coho salmon, amphibians, small mammals, and some vascular plants. “

Table 3&4-9 arrayed percentage probabilities that late-successional forest connectivity would be strong to very strong (Outcomes 1 and 2). Alternative 1 was associated with a probability of 92 percent in moist provinces and 76 percent in dry provinces. Alternative 9 was associated with a probability of 80 percent in moist provinces and 66 percent in dry provinces.

To the extent that No Action results in forest management similar to Alternative 1 in terms of old-growth harvest, greater probabilities of strong to very strong connectivity would be predicted. The Proposed Action/Alternative A would be more likely to have results similar to Alternative 9. The Northwest Forest Plan assumed a common, 100-year timeframe to evaluate the different alternatives. This is consistent with the Proposed Action/Alternative A interpretation that many Northwest Forest Plan objectives (including the ACS) are long-term objectives that cannot be achieved at the site-scale.

### *Chapters 3&4, pgs. 51 – 82: Aquatic Ecosystems*

The FSEIS stated:

“The likelihood of achieving an outcome of sufficient quality, distribution and abundance of habitat to allow fish populations to stabilize, well distributed across federal lands, is lower for Alternatives 2, 3, 5, 6, and 10 than for Alternatives 1, 4, and 9. Alternative 9’s standards and guidelines would provide a level of habitat protection comparable to Alternative 4 because of the incorporation of Riparian Reserve Scenario 1 discussed in this chapter. However, the Assessment Team concluded that all alternatives will reverse the trend of degradation and begin recovery of aquatic ecosystems on federal lands within the range of the northern spotted owl except for Alternatives 7 and 8. Even if changes in land management practices and comprehensive restoration programs are initiated, it is possible that no alternative will completely recover all degraded aquatic systems within the next 100 years.”

“The ecosystem assessment shows that the likelihood of attaining a functional and interconnected late-successional and old-growth forest ecosystem in the next 100 years is reduced because some characteristics of terrestrial ecosystems will not be obtained for at least 200 years. Similarly, the Assessment Team expected that degraded aquatic ecosystems will not be fully functional in 100 years. Faster recovery rates are probable for aquatic ecosystems under Alternatives 1 and 4, and Alternative 9, which includes the standards and guidelines added since the Draft SEIS than under the other alternatives (Figure 3&4-6). Alternatives 1 and 4 and Alternative 9 with the standards and guidelines incorporated since the Draft SEIS would reduce management-related disturbance across the landscape due to application of a larger Late-Successional Reserve network and use of the more protective Riparian Reserve Scenario 1 which requires wider Riparian Reserve widths for intermittent streams in Tier 2 Key Watersheds and non-Key Watersheds.”

Neither alternative in the ACS SEIS would change the assumptions or conclusions stated in the above paragraph. Watershed analysis and the ACS objectives were discussed in this section:

“Decision makers will use the information developed during a watershed analysis to support decisions and to determine if a proposed project meets Aquatic Conservation Strategy objectives. This is a new approach; in the past, proposed projects were considered from the context of what effects (positive and negative) a proposed project would have on the conditions and functions and processes of a watershed.”

The Proposed Action/Alternative A within the ACS SEIS would modify the approach suggested by the aforementioned paragraph. Under the Proposed Action/Alternative A, decision-makers would use the results of watershed analysis to provide context for



project planning. This approach is consistent with other sections of the Northwest Forest Plan and FSEIS as discussed throughout the ACS SEIS and Appendices.

The FSEIS addressed Key Watersheds:

“The 143 Tier 1 Key Watersheds were selected specifically for contributing directly to the conservation of habitat for at-risk anadromous salmonids, bull trout, and resident fish species. The 21 Tier 2 Key Watersheds are important sources of high quality water (Appendix B6, Table B6-3).”

These expected outcomes to at-risk anadromous salmonids would not change as a result of the Proposed Action/Alternative A. The role of Key Watersheds is consistent between the alternatives.

Standards and Guidelines associated with Riparian Reserves are discussed:

“Alternatives 1 and 4 and Alternative 9 which includes the standards and guidelines incorporated since the Draft SEIS benefit aquatic and riparian habitats more than the other alternatives. These benefits are principally due to: (1) the application of Riparian Reserve Scenario 1 to intermittent streams in Tier 2 Key Watersheds and non-Key Watersheds, (2) the highest amounts of Late-Successional Reserves within Key Watersheds and throughout the range of the northern spotted owl, and (3) the least amount of the matrix contained within inventoried roadless areas. Aquatic and riparian habitats are expected to recover faster under Alternatives 1, 4 and 9, in part, due to these factors.”

Both of the ACS SEIS alternatives are consistent with these outcomes.

### ***Chapters 3&4, pgs. 83 – 111: Air and Water Quality and Soil Productivity***

“The effects to water quality under the alternatives vary depending on the acreages and distribution of the various land allocations and the type and location of land disturbing activities occurring under the alternative. The **most significant factors** related to potential water quality effects for each alternative are the Riparian Reserve scenarios, the level and location of road building, and the amount and method of timber harvest permitted.” “Alternatives 1, 4, and 9 would have the least adverse effects to water quality” **(Bold Emphasis added)**

All ACS SEIS alternatives include the Riparian Reserve scenario described in this reference. The level and location of road building and amount of timber harvest would not exceed that assumed in Alternative 9 in any alternative. Project design criteria would not be expected to change. This is because the Standards and Guidelines are consistent across both alternatives. FSEIS findings about water quality would also remain unchanged.

“Alternatives 2, 3, 5, 6 and 10 have the potential for comparatively greater effects to water quality than Alternatives 1, 4, and 9, primarily because they provide less protection for intermittent streams in Tier 2 Key Watersheds and non-Key Watersheds. Alternatives 7 and 8 have the greatest potential to impact water quality of the 10 alternatives analyzed in this SEIS.”

Both the alternatives in the ACS FSEIS provide full protection for intermittent streams and non-Key Watersheds.

“Based on the Riparian Reserve scenarios and other components of the Aquatic Conservation Strategy, all of the alternatives except 7 and 8 are expected to maintain or improve water quality, although watershed recovery rates would be quickest for Alternatives 1, 4, and 9.”

The rates of recovery in both Alternatives 1 and 9 (and No Action and the Proposed Action/Alternative A) are based on the land allocations, including Key Watersheds. These are consistent between all alternatives in the ACS SEIS. See table 3&4 – 13 and table 2-4). Water quality is discussed on page 107. These findings will not change under No Action or the Proposed Action/Alternative A because both include the four components of the ACS. Roads and harvest levels outside of Riparian Reserves may be higher under the Proposed Action/Alternative A than No Action (No Action is associated with results more similar to Alternative 1 in the Northwest Forest Plan), but both alternatives would be within the range considered.

“The level of water quality protection under Alternatives 1, 4, and 9 should also benefit water supply systems within and downstream from lands administered by the Forest Service and BLM. The Riparian Reserve scenarios and other components of the Aquatic Conservation Strategy under these three alternatives should contribute to the ability of water systems to remain unfiltered and comply with Safe Drinking Water Act requirements...[a]dverse cumulative effects to water quality and water supply systems would be the greatest under Alternatives 7 and 8 and the least under Alternatives 1, 4, and 9. The difference in cumulative effects among alternatives is primarily a function of the alternatives’ proposed level of land disturbance (e.g., roads, harvest levels) and the degree of Aquatic Conservation Strategy adoption.”

The 1994 FSEIS discussed the Aquatic Conservation Strategy on page 107, stating:

“The broad scale application of the full Aquatic Conservation Strategy within the range of the northern spotted owl will significantly reduce the potential for adverse cumulative effects to water quality. Land disturbances will be more localized and related primarily to land allocations and standards and guidelines that apply. Cumulative effects will be further addressed in subsequent analyses and for tiered plans and projects.”

Both No Action and the Proposed Action/Alternative A include the same land allocations

and standards and guidelines, and site-specific analysis requirements under NEPA (including cumulative effects analysis) are consistent between these alternatives. No Action may not allow “broad scale application of the full ACS” to the extent that No Action results in implementation of fewer projects needed to contribute to achievement of Northwest Forest Plan and ACS objectives. Overall “land disturbance” is predicted to be lower for No Action, assuming fewer projects implemented. In this sense, No Action is more similar to Alternative 1 than Alternative 9.

The FSEIS discussed the role of non-federal lands (3&4-108):.

“The role of nonfederal landowners is significant because water quality protection on federal lands alone may not ensure attainment of water quality standards downstream.”

This statement remains true for both No Action and the Proposed Action/Alternative A. Page 3&4 202 also addressed non-federal land:

“The success of the strategy does not depend on actions on nonfederal lands. Many of the federal watersheds occur upstream of nonfederal watersheds. Thus, the strategy can succeed at maintaining and restoring the aquatic and riparian habitats regardless of what happens on nonfederal lands but that would not ensure population viability of many of the fish stocks evaluated in this SEIS. This statement is less true in multi-ownership watersheds, particularly for BLM administered lands that are juxtaposed between nonfederal parcels.”

The FSEIS also compared the ACS with water quality, fish, and riparian protections on non-federal land.:

“Riparian Reserves and the other components of the Aquatic Conservation Strategy would provide greater protection of water quality, fish habitat, and riparian areas than is currently required for nonfederal lands, particularly for Alternatives 1, 4, and 9.”

This remains consistent under both No Action and the Proposed Action/Alternative A. Although there have been changes to the Forest Practices Act in Oregon, application of Riparian Reserves in the ACS remains more comprehensive set of best management practices, largely due to the Riparian Reserve land allocation along intermittent streams.

Soils and soil productivity were discussed on page 3&4-112.:

“The most common types of management disturbances that affect soils and related long-term productivity include soil displacement and compaction, erosion (surface and mass wasting), and alteration of nutrient status and soil biology. Late-Successional Reserves, Riparian Reserves, and Administratively Withdrawn Areas have the highest probability of maintaining long-term soil productivity because they will have the least amount of management-induced disturbance.”

Both No Action and the Proposed Action/Alternative A include the same land allocations and Standards and Guidelines for reserves and withdrawn areas. These areas will continue to have the least amount of management-induced disturbance under both alternatives.

***Chapters 3&4, pgs. 113 – 130: Process for Assessing Effects of Alternatives on Species habitat sufficiency on Federal Lands Within the Range of the Northern Spotted Owl***

Late-successional The alternatives within the 1994 FSEIS were reviewed for their contribution to retention of late-successional habitat and species (3&4-115):

“More than 1000 species were identified as being associated with late-successional forests on federal lands... In addition to this list of species, 15 functional groups of arthropods, representing more than 8,000 individual species, were reviewed...”The rating process was a subjective evaluation of the sufficiency of the amount and distribution of late-successional and old-growth habitat on federal lands under each option to support the species or group of species over the next 100 years. ...”(FEMAT Report, p. II-29)”

The original SAT, FEMAT, and 1994 FSEIS analyses reviewed thousands of organisms for their link to old-growth forests. They evaluated the relative likelihood of four viability outcomes under the different alternatives. These assessments focused on the link of each of the organisms to old-growth forests and did not rely directly on the ACS. Riparian Reserves were expected to provide benefits to late-successional habitats and species.

***Chapters 3&4, pgs. 130 – 205: Species Not Threatened or Endangered***

This section described analyses of nonvascular plants and allies, fungi, lichens, vascular plants, invertebrates (including mollusks), amphibians, reptiles, birds, and mammals (including bats). Riparian Reserves were expected to provide habitat riparian-dependent species not threatened or endangered. For example, on page 3&4-147 outcome ratings for lichens were generally correlated with:

”the acreage of Late-Successional Reserves, stand treatments within the matrix, and protection for riparian corridors (aquatic and riparian lichens).”

This passage is typical of many of the references to ACS components in this section of the 1994 FSEIS. However, the FSEIS also concluded that other factors besides differences between its alternatives could affect anadromous fish:

“Two key points are important when considering the effects of any federal land management under each alternative on anadromous fish. First, there may be other factors such as overharvest, disease, and hatchery practices and other habitat impacts not related to timber harvest such as hydropower and

irrigation developments that have caused and will continue to affect the declines of anadromous salmonid populations. Second, a plan for managing federal lands will not necessarily correct problems on nonfederal land, and anadromous fish are, in many cases, adversely affected by nonfederal actions.”

This finding remains true under both No Action and the Proposed Action/Alternative A.

***Chapters 3&4, pgs. 205 – 258: Species Not Threatened or Endangered***

This section included repeated references to Riparian Reserves. Riparian Reserves would not change in any alternative.

***Chapters 3&4, pgs. 259 – 260: Three Court-Identified Defects to the Forest Service 1992 FEIS***

None of the alternatives would change how the agencies dealt with Court-Identified defects to the 1992 Forest Service FEIS.

***Chapters 3&4, pgs. 261 – 318: Effects on Communities***

As discussed in the ACS SEIS, the action alternatives are intended to provide the same mix of products and services as Alternative 9 in the 1994 FSEIS (as adjusted in individual RMPs). Current timber production is an indicator of the overall program; in terms of annual board feet sold, current federal harvest levels within the Northwest Forest Plan area are closer to Alternative 1 than Alternative 9. Effects of all alternatives are within the range described in this section.

In 2000, the Secure Rural Schools and Community Self-Determination Act was signed. Under the Act, counties within the Northwest Forest Plan area elected to receive a guaranteed level of payment, instead of payments that are a direct percentage of timber harvest receipts. Northwest Forest Plan FSEIS findings related to county payments may no longer be accurate. Other socio-economic effects from Alternative 1 still apply to No Action and other socio-economic effects from Alternative 9 still apply to both action alternatives.

***Chapters 3&4, pg 319: Other Environmental Consequences***

Implementation of the Proposed Action/Alternative A would not affect any of the analytic assumptions or conclusions of this chapter.

***Chapters 3&4, pgs 319-321: Conflicts with Other Plans***

Implementation of the Proposed Action/Alternative A would not affect any of the analytic assumptions or conclusions of this chapter.

***Chapters 3&4, page 321: Irreversible or Irretrievable Commitments***

Implementation of the Proposed Action/Alternative A would not affect any of the analytic assumptions or conclusions of this chapter.